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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,269	09/27/2004	Mahito Kawano	TOR-04-1238	5364

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EXAMINER	
CHEVALIER, ALICIA ANN	
ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
09/17/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

Office Action Summary	Application No.	Applicant(s)	
	10/509,269	KAWANO ET AL.	
	Examiner	Art Unit	
	ALICIA CHEVALIER	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 10-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 10-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

RESPONSE TO AMENDMENT

1. Claims 1-6 and 10-21 are pending in the application, claims 7-9 have been.

2. Amendments to the specification and the claims, filed on June 10, 2009, have been entered in the above-identified application.

REJECTIONS

3. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action**.

Claim Rejections - 35 USC § 103

4. Claims 1-6 and 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oka et al. (U.S. Patent No. 6,064,524) in view of Yamada et al. (U.S. Patent No. 6, 051,665) and Murata et al. (U.S. Patent No. 5,886,819).

Regarding Applicant's claims 1, 2, 11, 12 and 18-21, Oka discloses a multilayer film (*optical functional materials, title*) comprising a substrate film (a) (*transparent substrate, col. 8, line 43 and figure 15a, reference #11*), a hard coat layer (b) containing a (meth)aerylate compound (*clear hard coat layer, col. 18, lines 1 and 34 and figure 15a, reference #16*), an electrically conductive layer (c) containing electrically conductive particles (*antiglare layer with high refractive index, col. 12, lines 16-30 and figure 15a, reference #12*), and a resin layer (d) (*low refractive index layer, col. 26, lines 6-7 and figure 15a, reference #13*), those thee layers being disposed on at least one face of the substrate film (a) (*figure 15 a*). The resin layer (d) has

fine irregularities on the surface (*figure 15a*). The surface of the resin layer (d) of the multilayer film has a reflectance of less than 2% (*col. 1, lines 44-45*).

Oka further discloses that the metal particles enhance the high reflective index of the electrically conductive layer (*antiglare layer, col. 11, lines 63-66*), but does not specify the weight percent of particles in the layer. Therefore, exact weight percent of the content of particles is deemed to be a result effective variable with regard to the high index of refraction property. It would require routine experimentation to determine the optimum value of a result effective variable, such as weight percent of content, in the absence of a showing of criticality in the claimed weight percent. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). One of ordinary skill in the art would want a high weight percent of particles in order to increase the reflective index, which would help reduce glare.

Oka fails to disclose the claimed composition of the resin layer.

Yamada discloses a coating composition with low refractive index which exhibits superior adhesion to various substrate, excellent scratch resistance, and excellent weatherability (*abstract*). The coating composition comprises a fluorine containing copolymer having a vinyl ether in principal chain (*col. 3, lines 29-55*) and silica particles with a particle size of 0.001 to 0.2 μm (*col. 15, lines 23-38*). The composition further comprises a saline coupling agent or a hydrolysate of the agent or a product obtained by subjecting the hydrolysate to reaction that meets the formulas of claim 11 (*col. 6, lines 35-67*), a alkoxysilyl group (*col. 9, line 46 through col. 10, line 12*) and a cross-linkable compound (*col. 10, liens 22-24*). The fluorine-containing copolymer contains a fluorine-containing olefin chain with a fluorine content of 30% or more, or

20% to 70%, and contains 10% to 70% of a repeating unit derived from the vinyl ether-containing compound (*col. 6, lines 12-21*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the low refractive index coating composition of Yamada as the low refractive index resin layer of Oka because Yamada's coating composition exhibits superior adhesion to various substrate, excellent scratch resistance, and excellent weatherability.

Oka and Yamada fail to disclose the resin layer having an arithmetic average surface roughness Ra ranging from 0.004 μm to 0.020 μm or a haze of less than 3%.

Murata discloses antiglare material having an arithmetic average surface roughness Ra ranging from 0.03 μm to 0.20 μm (*col. 3, lines 55-57*) or a haze of less than 3% (*col. 4, lines 5-20*). If the Ra is too high a glittering phenomenon occurs and if it is too small there is insufficient antiglare effect. Likewise if the haze is too low it will cause a decrease in the antiglare effect and if it is too high the contrast of the images would be decreased (*col. 3, lines 61-64*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to having have a haze of less than 3% for the resin layer in the combination of Oka and Yamada as taught by Murata in order to insure good visibility through the film.

The exact surface roughness, Ra, of the resin layer is deemed to be a result effective variable with regard to the antiglare effect. It would require routine experimentation to determine the optimum value of a result effective variable, such as Ra, in the absence of a showing of criticality in the claimed Ra. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Regarding Applicant's claims 3 and 4, Oka discloses that the substrate contains a polymer containing one selected from the group consisting of the ester, the acetate and the acrylate (*col. 8, lines 43-55*).

Regarding Applicant's claims 5-6, Oka disclose discloses that the electrically conductive layer (c) has a thickness of 0.01 μm to 1.0 μm (*col. 9, lines 63-67*) and contains a metal oxide particles (*col. 12, lines 16-30*).

Regarding Applicant's claims 13-17, the preambles "display film," "display", "display filter," "front protector panel" and "plasma display" are deemed to be statements with regard to the intended use and are not further limiting in so far as the structure of the product is concerned. In article claims, a claimed intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. MPEP § 2111.02.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oka et al. in view of Yamada et al. and Murata et al. as applied above, and further in view of Hasuo et al. (U.S. Patent No. 6,716,513).

Oka, Yamada and Murata are relied upon as described above.

Oka, Yamada and Murata fail to disclose the silica particles have two or more particle size distributions.

Hasuo teaches a material with antifogging properties and antifouling properties (*col. 1, lines 14-20*). The material comprises silica particles with at least two size distributions (*figure 1 and claims 1-4*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use silica particles with at least two size distributions as taught by Hasuo in the combination of Oka, Yamada and Murata in order to improve the antifogging and antifouling properties.

ANSWERS TO APPLICANT'S ARGUMENTS

6. Applicant's arguments in the response filed June 10, 2009 regarding the 35 U.S.C. 103(a) rejection over Oka in view of Yamada and Murata of record have been carefully considered but are deemed unpersuasive.

Applicant argues that the combination of references fail to teach Applicant's multilayer film as recited in Claims 1-6 and 11-21. Specifically Applicant argues that claim 1 recites that the arithmetic average surface roughness Ra ranges from 0.004 μm to 0.020 μm, which is different from the claimed range in Murata 0.03 to 0.3 μm. Applicant further argues that the rejection simply ignores the etching of Murata and fails to account for the Applicant's findings as well.

The examiner acknowledges that the range disclosed in Murata is slightly out side of the claimed range. However, it must be noted that Murata does discloses that if the Ra is too high a glittering phenomenon occurs and if it is too small there is insufficient antiglare effect. Likewise if the haze is too low it will cause a decrease in the antiglare effect and if it is too high the contrast of the images would be decreased (*col. 3, lines 61-64*). Therefore, the exact surface roughness, Ra, of the resin layer is deemed to be a result effective variable with regard to the antiglare effect. It would require routine experimentation to determine the optimum value of a

result effective variable, such as Ra, in the absence of a showing of criticality in the claimed Ra. Furthermore, An ordinarily skilled artisan would have recognized using slightly lower Ra, e.g. 0.02 μm, was a workable option from these teachings because if the Ra is too high a glittering phenomenon occurs and if it is too small there is insufficient antiglare effect, even if perhaps of somewhat smaller size, would have been recognized as predictable and within the reach of such an ordinarily skilled artisan by using a slightly lower Ra, e.g. 0.02 μm. MPEP 2141 III.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alicia Chevalier/
Primary Examiner, Art Unit 1794
9/15/2009